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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,553	10/31/2003	Tomokazu Yuasa	026304-0212	9930
23392	7590	12/28/2004	EXAMINER	
FOLEY & LARDNER 2029 CENTURY PARK EAST SUITE 3500 LOS ANGELES, CA 90067			AL NAZER, LEITH A	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/698,553	TOMOKAZU YUASA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Leith A Al-Nazer	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>31 October 2003</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities:

Reference numbers 203, 204, 303, and 304 shown in figures 10 and 11 are not addressed in the specification.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 7 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The wording of claims 7 and 16 is vague, and, as a result, the Examiner is not sure what structure is attempting to be claimed.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 5-9, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by JP09-270729 to Nishiyama.

With respect to claim 1, Nishiyama teaches a communication apparatus comprising a speaker (21); a headband (22) which connects to the speaker at an end thereof; a wireless communication module (1) coupled to the speaker; and an antenna (16) arranged on the headband, and coupled to the wireless communication module.

With respect to claim 5, Nishiyama teaches the antenna (16) being arranged on a higher portion in the headband than the speaker (21) in a condition under which the communication apparatus is used (figure 2).

With respect to claims 6 and 7, Nishiyama teaches the headband having an arc portion on which the antenna is mounted (figure 2).

With respect to claims 8 and 16, Nishiyama teaches a communication apparatus comprising a pair of speakers (21); a headband (22) with two ends which connects to each of the speakers respectively; a wireless communication module (1) coupled to the speakers; and an antenna (16) arranged on the headband, and coupled to the wireless communication module.

With respect to claim 9, Nishiyama teaches the communication apparatus further comprising a pair of ear pad parts attached to the pair of speakers respectively (figure 2).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 2, 3, and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP09-270729 to Nishiyama in view of Parker US2004/0204207 or Begic US2003/0157903.

Claims 2, 3, and 14 require the communication apparatus further comprise a flexible circuit board. Use of a flexible circuit board in communication apparatus is well known in the art, as is evidenced by Parker (paragraph 0005) or Begic (22 in figure 3). At the time of the invention, it would have been obvious to one having ordinary skill in the art to utilize a flexible printed circuit board in the system of Nishiyama. The motivation for doing so would have been to fit the circuit board into a specific confined space, such as within the headband.

Claim 13 requires the antenna be located at a substantially central part of the headband. It is well known in the art to locate an antenna at the highest possible point in a communication system. At the time of the invention, it would have been obvious to one having ordinary skill in the art to take the system of Nishiyama and place the antenna at a substantially central part of the headband. The motivation for doing so would have been to optimize the position of the antenna in order to receive a maximum number of signals.

Claim 15 requires the flexible circuit board be located at a substantially central part of the headband. It is well known in the art to locate an antenna at the highest possible point in a communication system. At the time of the invention, it would have been obvious to one having ordinary skill in the art to take the system of Nishiyama and place the antenna at a substantially central part of the headband. The motivation for doing so would have been to optimize the position of the antenna in order to receive a maximum number of signals.

9. Claims 4, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP09-270729 to Nishiyama in view of Boesen 2002/0198021.

Claims 4, 11, and 12 require a second antenna be arranged at the end of the headband and be coupled to the wireless communication module. It is well known in the art to utilize a second antenna in a communication apparatus, as is evidenced by Boesen (paragraph 0017). Therefore, at the time of the invention, it would have been obvious to one having ordinary skill in the art to utilize a second antenna in the system

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of Nishiyama. The motivation for doing so would have been to provide two channels over which to communicate.

10. Claims 10 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP09-270729 to Nishiyama in view of Hwang 2002/0090099.

Claim 10 requires the wireless communication module be arranged at one of the ear pads. Compact wireless communication modules are well known in the art, as is evidenced by Hwang (figures 1-4). At the time of the invention, it would have been obvious to one having ordinary skill in the art to utilize the compact communication module of Hwang in the ear pad part of the system taught by Nishiyama. The motivation for doing so would have been to make the system of Nishiyama more compact and portable.

Claim 17 requires the wireless communication module be arranged at the headband. Compact wireless communication modules are well known in the art, as is evidenced by Hwang (figures 1-4). At the time of the invention, it would have been obvious to one having ordinary skill in the art to utilize the compact communication module of Hwang in the headband portion of the system taught by Nishiyama. The motivation for doing so would have been to make the system of Nishiyama more compact and portable.

***Citation of Pertinent References***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents and patent application publications further show the state of the art with respect to wireless communication apparatus:

- a. U.S. Patent No. 4,882,745 to Silver
- b. U.S. Patent No. 5,815,126 to Fan et al.
- c. U.S. Patent Application Publication No. 2002/0021800 to Bodley et al.
- d. U.S. Patent Application Publication No. 2004/0136543 to White et al.
- e. U.S. Patent Application Publication No. 2004/0198464 to Panian

***Communication Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leith A Al-Nazer whose telephone number is 571-272-1938. The examiner can normally be reached on Monday-Friday, 7:30-4:00.

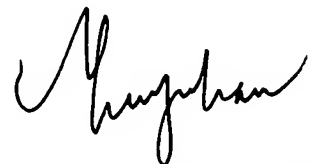
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LA

  
THUY V. TRAN  
PRIMARY EXAMINER